## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: John Deryk Waters, et al.

Serial No.: Not yet assigned

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For: "LOCATING ITEMS"

Re: Preliminary Amendment

Our Ref: B-4228 618900-6

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Commissioner of Patents and Trademarks BOX NEW PATENT APPLICATION Washington, D.C. 20231

Sir:

Prior to examining this continuation application, it is respectfully requested that the following amendments be made to the claims:

### IN THE CLAIMS

Please replace Claims 3-5, 7-12, 14, 17-19, 22-24, 26-30, 35-36, 38-39, 41-43, and 47-51 with new amended Claims 3-5, 7-12, 14, 17-19, 22-24, 26-30, 35-36, 38-39, 41-43, and 47-51 which are set forth below. (Appendix A, which is enclosed herewith, shows how 3-5, 7-12, 14, 17-19, 22-24, 26-30, 35-36, 38-39, 41-43, and 47-51 were amended to produce new amended Claims 3-5, 7-12, 14, 17-19, 22-24, 26-30, 35-36, 38-39, 41-43, and 47-51.) Please cancel claims 32 and 37 without prejudice.

- 3. (amended) A method according to claim 1 in which each piconet device creates its own activity log and stores it in itself, in its own memory.
- 4. (amended) A method according to claim 1 in which a piconet device stores its activity log remote from itself.
- 5. (amended) The method of claim 1 comprising having a search-requesting piconet device check its own piconet for the presence of the missing device before screening the activity log, or its own piconet activity log to look for a historic piconet to which both itself, the missing item, and said other piconet device belonged, and then contacting said other piconet to establish whether the missing item is part of the current piconet of said other piconet device.
- 7. (amended) The method of claim 1 comprising asking piconet devices with long range telecommunication capabilities whether the missing item is presently in their local piconet in reverse chronological order that they are known from the activity log to have been in contact with the missing item.
- 8. (amended) The method according to claim 1 comprising having a cut off point beyond which the search does not backtrack for contacts.
- 9. (amended) The method of claim 1 comprising either using (i) a search-requesting piconet device which itself has a long distance telecommunication capability; or (ii) using a device which has only piconet range telecommunications but that is in contact with a piconet member which does have long distance

telecommunications ability and uses their long range telecommunications; to contact said other devices.

- 10. (amended) The method according to claim 1 comprising sequentially asking those other piconet devices that are identified from the activity log for information on whether the missing item is in their current piconet.
- 11. (amended) The method according to claim 1 comprising simultaneously or substantially simultaneously asking a plurality of said other devices for information on whether the missing item is in their current piconet, without waiting for a reply from the first said other device interrogated.
- 12. (amended) The method of claim 1 further comprising having the piconet devices record their geographical, or physical, location at the time that a piconet exists.
- 14. (amended) The method of claim 1 wherein the creation of the activity logs of the piconet devices occurs automatically without human intervention when the devices form a piconet.
- 17. (amended) The method of claim 15 comprising visiting the vicinity of the last known position of the missing item to see if the missing item is there, or contacting a person or device in the vicinity of the last known position of the missing item to enquire after the item.
- 18. (amended) The method of claim 15 comprising electronically contacting a known piconet device known to be in the locality of the place where the missing item was last known to be, and enquiring whether the missing item is detectable by the contacted device.

- 19. (amended) The method of claim 15 comprising identifying known piconet devices that are believed to be in the vicinity of the last known location of the missing item and determining whether the missing item is in a piconet with them.
- 22. (amended) A device according to claim 20 which has a memory and in which the controller is adapted to store the device's activity log in the memory of the device.
- 23. (amended) A device according to claim 20 which is a dual mode device having a long range telecommunications transmitter and receiver, and in which the device is adapted to contact said dual mode device that is known at one time to have been in a piconet with the missing item, or to contact a piconet device near the last known position of the missing item, using its long range telecommunication transmitter and receiver.
- 24. (amended) A device according to claim 20 in which the controller has the capability of recording in the activity log the geographical location of the device and associating the position of the device at a point in time with the piconet members at that point in time.
- 26. (amended) A device according to claim 20 which has a clock and is adapted to time-stamp piconet membership data at a particular point in time using its clock; or which is adapted to import the time from an external source and adapted to time stamp the details of which devices were members of the piconet at a certain time.
- 27. (amended) A device according to claim 20 which is a portable mobile electronic device.
- 28. (amended) A device according to claim 20, in which the

controller is adapted to establish the telecommunications address of piconet members and store them so as to be able to retrieve them in order to contact them at some time in the future.

- 29. (amended) A device according to claim 20 which is adapted to establish the nearest fixed device position, or last known position of a mobile device, that has long range telecommunications, near to the last known position of the missing item, and to contact them to enquire whether the missing item is in their piconet.
- 30. (amended) A device according to claim 20 which has details of predetermined favourite locations, and corresponding address for long range telecommunication devices which are equipped for piconet communication and which are near or associated with these locations, and which is adapted to contact such devices as part of a search for a missing item.

Please cancel Claim 32.

- 35. (amended) A device according to claim 33 wherein the controller is also adapted to record the geophysical location associated with a piconet membership at a particular time.
- 36. (amended) A device according to claim 35 wherein the device has a location sensor adapted to provide details of the location of the device.

Please cancel Claim 37.

- 38. (amended) A device according to claim 33 which is hand-portable and pocketable.
- 39. (amended) A device according to claim 20 further comprising the

controller having details of an associated item set associating a set of known items in a notional group, and the controller being adapted to monitor the piconet to which the device belongs and being adapted to generate an alarm when an item from said associated item set leaves the piconet.

- 41. (amended) A device according to claim 39 wherein the controller is adapted to generate an alarm when it detects the absence from the piconet to which the device belongs of an item from the associated item set.
- 42. (amended) A device according to claim 39 having a user-operable alarm cancellation input adapted to enable a user to stop an alarm.
- 43. (amended) A device according to claim 20 wherein the controller is adapted to generate a report analysing the piconet activity log and/or export the piconet activity log to another electronic device.
- 47. (amended) A method according to claim 1 comprising having an associated set of piconet member articles whose presence in the piconet is tracked, and generating an alarm when an article of the associated set of piconet member articles leaves the piconet.
- 48. (amended) A method according to claim 44 comprising generating a report analysing the contents of the piconet activity log.
- 49. (amended) A method according to claim 44 comprising generating a report on articles in the present or historic piconets using the piconet activity log.
- 50. (amended) A method according to claim 48 comprising generating at least one of the following reports:
- (i) members of piconet at a particular time;

- (ii) history of piconet membership for a selected piconet member device;
- (iii) correlation of piconet membership for selected first and second piconet member devices;
- (iv) selected piconet device at selected physical location(s);
- (v) piconet member devices that have been at selected physical location(s).
- (amended) A data carrier having a program encoded upon it, the 51. program when loaded onto, or running on, a controller of a piconet device having a piconet receiver capable of receiving information about members of a piconet to which the device temporarily belongs causes the controller to capture a piconet activity log when the device comes within piconet range of other piconet devices and to build up a log of which other devices were piconet members with the device and at what time that piconet existed, and also which of those devices are dual mode devices having both piconet capabilities and having long range telecommunication abilities, and to establish their long range telecommunication addresses; and further causes the controller on receiving a request to search for a missing item of known identity to screen the activity log to identify historic piconets which contained the missing item and a dual mode device, and upon identifying such a dual mode device to contact it via long range telecommunications and to establish whether the missing item is in the current piconet of the dual mode device.

Please add the following new Claims:

- 52. A data carrier having a program encoded upon it, the program when loaded onto, or running on, a controller of a piconet device having a piconet receiver capable of receiving information about members of a piconet to which the device temporarily belongs causes the controller to capture a piconet activity log when the device comes within piconet range of other piconet devices, the piconet activity log comprising a record of which other devices were piconet members with the device and at what time that piconet existed and a positional location for the piconet at that time; and further causes the controller on receipt of a request to search for a missing item of known identity and to screen the activity log to identify historic piconets known to the device to have contained the missing item and the positional location of the historic piconet which last contained the missing item, the device being adapted to communicate the last, piconet-known to the device, location of the missing item to the user.
- 53. A data carrier having a program encoded upon it, the program when loaded onto, or running on, a controller of a piconet device having a piconet receiver capable of receiving information about members of a piconet to which the device temporarily belongs causes the controller to create automatically, without user intervention, when the device comes

within piconet range of a piconet apparatus and communicates with said piconet apparatus, a piconet activity log which records the identity of the members of the piconet to which the device belongs.

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  - 54. A device according to claim 21 which has a memory and in which the controller is adapted to store the device's activity log in the memory of the device.
  - 55. A device according to claim 21 which is a dual mode device having a long range telecommunications transmitter and receiver, and in which the device is adapted to contact said dual mode device that is known at one time to have been in a piconet with the missing item, or to contact a piconet device near the last known position of the missing item, using its long range telecommunication transmitter and receiver.
  - 56. A device according to claim 21 in which the controller has the capability of recording in the activity log the geographical location of the device and associating the position of the device at a point in time with the piconet members at that point in time.
  - 57. A device according to claim 56 which has a location identifier.
  - 58. A device according to claim 21 which has a clock and is adapted to time-stamp piconet membership data at a particular point in time using its clock; or which is adapted to import the time from an external source and adapted to time stamp the details of which devices were members of the piconet at a certain time.
  - 59. A device according to claim 21 which is a portable mobile electronic device.
  - 60. A device according to claim 21, in which the controller is adapted to establish the telecommunications address of piconet members and store them so as to be able to retrieve them in order to contact them at some time in the future.

- 61. A device according to claim 21 which is adapted to establish the nearest fixed device position, or last known position of a mobile device, that has long range telecommunications, near to the last known position of the missing item, and to contact them to enquire whether the missing item is in their piconet.
- 62. A device according to claim 21 which has details of predetermined favourite locations, and corresponding address for long range telecommunication devices which are equipped for piconet communication and which are near or associated with these locations, and which is adapted to contact such devices as part of a search for a missing item.
- 63. A device according to claim 21 further comprising the controller having details of an associated item set associating a set of known items in a notional group, and the controller being adapted to monitor the piconet to which the device belongs and being adapted to generate an alarm when an item from said associated item set leaves the piconet.
- 64. A device according to claim 63 wherein the controller is adapted to generate an immediate alarm and the alarm is adapted to attract the attention of the user via at least one of their senses.
- 65. A device according to claim 63 wherein the controller is adapted to generate an alarm when it detects the absence from the piconet to which the device belongs of an item from the associated item set.
- 66. A device according to claim 63 having a user-operable alarm cancellation input adapted to enable a user to stop an alarm.

- 67. A device according to claim 21 wherein the controller is adapted to generate a report analysing the piconet activity log and/or export the piconet activity log to another electronic device.
- 68. A device according to claim 33 further comprising the controller having details of an associated item set associating a set of known items in a notional group, and the controller being adapted to monitor the piconet to which the device belongs and being adapted to generate an alarm when an item from said associated item set leaves the piconet.
- 69. A device according to claim 68 wherein the controller is adapted to generate an immediate alarm and the alarm is adapted to attract the attention of the user via at least one of their senses.
- 70. A device according to claim 68 wherein the controller is adapted to generate an alarm when it detects the absence from the piconet to which the device belongs of an item from the associated item set.
- 71. A device according to claim 68 having a user-operable alarm cancellation input adapted to enable a user to stop an alarm.
- 72. A device according to claim 33 wherein the controller is adapted to generate a report analysing the 'piconet activity log and/or export the piconet activity log to another electronic device.

#### **REMARKS**

This Preliminary Amendment amends Claims 3-5, 7-12, 14, 17-19, 22-24, 26-30, 35-36, 38-39, 41-43, and 47-51. Claims 3-5, 7-12, 14, 17-19, 22-24, 26-30, 35-36, 38-39, 41-43, and 47-51 are amended so that these claims are no longer multiply dependent in order to reduce the official fees which will be due. Claims 32 and 37 are being canceled to reduce the official fees which will be due. The Applicants may elect to amend Claims 3-5, 7-12, 14, 17-19, 22-24, 26-30, 35-36, 38-39, 41-43, and 47-51 to make them again multiply dependent or to add additional claims to this application to provide coverage similar to, broader than, or narrower than the present claims at any time during the pendency of the above-identified U.S. application.

Amendment of the subject application is respectfully requested.

Respectfully submitted,

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Enclosures: Appendix A (7 pages)

### Appendix A

# VERSION WITH MARKINGS TO SHOW CHANGES MADE

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Please amend the claims as follows:

- 3. (amended) A method according to claim 1 [or claim 2] in which each piconet device [preferably] creates its own activity log and stores it in itself, in its own memory.
- 4. (amended) A method according to claim 1 [or claim 2] in which a piconet device stores its activity log remote from itself.
- 5. (amended) The method of [any preceding] claim 1 comprising having a search-requesting piconet device check its own piconet for the presence of the missing device before screening the activity log, or its own piconet activity log to look for a historic piconet to which both itself, the missing item, and said other piconet device belonged, and then contacting said other piconet to establish whether the missing item is part of the current piconet of said other piconet device.
- 7. (amended) The method of [any preceding] claim 1 comprising asking piconet devices with long range telecommunication capabilities whether the missing item is presently in their local piconet in reverse chronological order that they are known from the activity log to have been in contact with the missing item.
- 8. (amended) The method according to [any preceding] claim  $\underline{1}$  comprising having a cut off point beyond which the search does not backtrack for contacts.
- 9. (amended) The method of [any preceding] claim <u>1</u> comprising either using (i) a search-requesting piconet device which itself has

- a long distance telecommunication capability; or (ii) using a device which has only piconet range telecommunications but that is in contact with a piconet member which does have long distance telecommunications ability and uses their long range telecommunications; to contact said other devices.
- 10. (amended) The method according to [any preceding] claim  $\underline{1}$  comprising sequentially asking those other piconet devices that are identified from the activity log for information on whether the missing item is in their current piconet.
- 11. (amended) The method according to [any one of claims 1 to 9] claim 1 comprising simultaneously or substantially simultaneously asking a plurality of said other devices for information on whether the missing item is in their current piconet, without waiting for a reply from the first said other device interrogated.
- 12. (amended) The method of [any preceding] claim  $\underline{1}$  further comprising having the piconet devices record their geographical, or physical, location at the time that a piconet exists.
- 14. (amended) The method of [any preceding] claim  $\underline{1}$  wherein the creation of the activity logs of the piconet devices occurs automatically without human intervention when the devices form a piconet.
- 17. (amended) The method of claim 15 [or claim 16] comprising visiting the vicinity of the last known position of the missing item to see if the missing item is there, or contacting a person or device in the vicinity of the last known position of the missing item to enquire after the item.

- 18. (amended) The method of [any one of claims 15 to 17] claim 15 comprising electronically contacting a known piconet device known to be in the locality of the place where the missing item was last known to be, and enquiring whether the missing item is detectable by the contacted device.
- 19. (amended) The method of [any one of claims 15 to 18] claim 15 comprising identifying known piconet devices that are believed to be in the vicinity of the last known location of the missing item and determining whether the missing item is in a piconet with them.
- 22. (amended) A device according to claim 20 [or claim 21] which has a memory and in which the controller is adapted to store the device's activity log in the memory of the device.
- 23. (amended) A device according to [any one of claims 20 to 22] claim 20 which is a dual mode device having a long range telecommunications transmitter and receiver, and in which the device is adapted to contact said dual mode device that is known at one time to have been in a piconet with the missing item, or to contact a piconet device near the last known position of the missing item, using its long range telecommunication transmitter and receiver.
- 24. (amended) A device according to [any one of claims 20 to 23] claim 20 in which the controller has the capability of recording in the activity log the geographical location of the device and associating the position of the device at a point in time with the piconet members at that point in time.
- 26. (amended) A device according to [any one of claims 20 to 25] claim 20 which has a clock and is adapted to time-stamp piconet membership data at a particular point in time using its clock; or

which is adapted to import the time from an external source and adapted to time stamp the details of which devices were members of the piconet at a certain time.

- 27. (amended) A device according to [any one of claims 20 to 26] <a href="mailto:claim 20">claim 20</a> which is a portable mobile electronic device.
- 28. (amended) A device according to [any one of claims 20 to 27] claim 20, in which the controller is adapted to establish the telecommunications address of piconet members and store them so as to be able to retrieve them in order to contact them at some time in the future.
- 29. (amended) A device according to [any one of claims 20 to 28] claim 20 which is adapted to establish the nearest fixed device position, or last known position of a mobile device, that has long range telecommunications, near to the last known position of the missing item, and to contact them to enquire whether the missing item is in their piconet.
- 30. (amended) A device according to [any one of claims 20 to 29] claim 20 which has details of predetermined favourite locations, and corresponding address for long range telecommunication devices which are equipped for piconet communication and which are near or associated with these locations, and which is adapted to contact such devices as part of a search for a missing item.

Please cancel Claim 32.

35. (amended) A device according to claim 33 [or claim 34] wherein the controller is also adapted to record the geophysical location associated with a piconet membership at a particular time.

36. (amended) A device according to claim 35 wherein the device has a [geophysical] location sensor adapted to provide details of the [geophysical] location of the device.

Please cancel Claim 37.

- 38. (amended) A device according to claim [37]33 which is hand-portable and pocketable.
- 39. (amended) A device according to [any one of claims 20 to 30, or 33 to 38,] claim 20 further comprising the controller having details of an associated item set associating a set of known items in a notional group, and the controller being adapted to monitor the piconet to which the device belongs and being adapted to generate an alarm when an item from said associated item set leaves the piconet.
- 41. (amended) A device according to claim 39 [or 40] wherein the controller is adapted to generate an alarm when it detects the absence from the piconet to which the device belongs of an item from the associated item set.
- 42. (amended) A device according to [any one of claims 39 to 41] claim 39 having a user-operable alarm cancellation input adapted to enable a user to stop an alarm.
- 43. (amended) A device according to [any one of claims 20 to 30, or claims 33 to 42] claim 20 wherein the controller is adapted to generate a report analysing the piconet activity log and/or export the piconet activity log to another electronic device.

- 47. (amended) A method according to [any one of claims 1 to 19 or any one of claims 44 to 46] claim 1 comprising having an associated set of piconet member articles whose presence in the piconet is tracked, and generating an alarm when an article of the associated set of piconet member articles leaves the piconet.
- 48. (amended) A method according to [any one of claims 1 to 19 or claims 44 to 47] claim 44 comprising generating a report analysing the contents of the piconet activity log.
- 49. (amended) A method according to [any one of claims 1 to 19 or claims 44 to 48] claim 44 comprising generating a report on articles in the present or historic piconets using the piconet activity log.
- 50. (amended) A method according to claim 48 [or claim 49] comprising generating at least one of the following reports:
- (i) members of piconet at a particular time;
- (ii) history of piconet membership for a selected piconet member device;
- (iii) correlation of piconet membership for selected first and second piconet member devices;
- (iv) selected piconet device at selected physical location(s);
- (v) piconet member devices that have been at selected physical location(s).
- 51. (amended) A data carrier having a program encoded upon it, the program when loaded onto, or running on, a controller of a piconet device [causing the piconet device to be a piconet device in accordance with any one of claims 20 to 30 or claims 33 to 43; and/or to perform the method of any one of claims 1 to 19 or claims 44 to 50; or to be part of a network in accordance with claim 31 or claim 32.] having a piconet receiver capable of receiving information about members of a piconet to which the device

temporarily belongs causes the controller to capture a piconet activity log when the device comes within piconet range of other piconet devices and to build up a log of which other devices were piconet members with the device and at what time that piconet existed, and also which of those devices are dual mode devices having both piconet capabilities and having long range telecommunication abilities, and to establish their long range telecommunication addresses; and further causes the controller on receiving a request to search for a missing item of known identity to screen the activity log to identify historic piconets which contained the missing item and a dual mode device, and upon identifying such a dual mode device to contact it via long range telecommunications and to establish whether the missing item is in the current piconet of the dual mode device.